
THERE ARE NO QUESTIONS PRINTED ON THIS PAGE

MIDDLESEX UNIVERSITY
and
THE DRIVING INSTRUCTORS ASSOCIATION
May 2008

DIPLOMA IN DRIVING INSTRUCTION (3008)
Module III: Vehicle Maintenance and Mechanical Principles

Wednesday 7 May 2008 9.30 am to 11.30 am

In addition to this paper you will require:

- a 12-page answer book
- a pen, pencil and rubber
- a ruler

Time allowed: 2 hours

Instructions

- Answer all questions in the answer book provided.
- Do all rough work in the answer book. Cross through any work you do not want marked.

Information

- The maximum mark for this paper is 100.
- Mark allocations are shown in brackets.

Answer all questions

- 1 Routine checks should be carried out on a car.
Identify five items that should be regularly checked and describe for each item how and why they should be checked (25 marks)
- 2 The exhaust system is fitted to the exhaust manifold of a car engine and is suspended underneath the car.
- Describe the main components and functions of a modern exhaust system with a simple diagram. (8 marks)
 - Give two symptoms that would warn a driver of a sudden fault in the exhaust system. (2 marks)
 - Describe a simple way of testing an exhaust for leaks. (2 marks)
 - Explain why corrosion is a common cause of faults in an exhaust system and why the corrosion may be difficult to detect. (2 marks)
 - What is the function of a catalytic converter? (2 marks)
 - Why are catalytic converters expensive? (1 mark)
 - MOT tests include a strict exhaust emission test.
 - What is the reason for this emission test? (1 mark)
 - What are the benefits of this test? (2 marks)
- 3 All new models of cars are tested to ensure that they comply with European legislation on safety standards before they can be sold to the public.
- What are these regulations primarily concerned with? (2 marks)
 - What are the main safety features in the car that should be checked before buying it? (8 marks)

- 4 The steering system on a modern car is the rack and pinion mechanism.
- Why are modern cars fitted with rack and pinion steering? (3 marks)
 - Explain the components and principles of the rack and pinion mechanism. (5 marks)
 - How could a driver notice any deterioration in the steering system that can occur through use? (4 marks)
 - What could be the cause of a vibration in steering at specific speeds? (3 marks)
 - Describe the functions and system of power-assisted steering. (5 marks)
- 5 The MOT test covers certain components in a vehicle.
- Discuss the lighting regulations that are checked on an MOT test. (10 marks)
 - Explain why a car might fail an MOT test due to illegal number plates. (5 marks)
- 6 Fuses are an important part of the electrical system of most vehicles. A blown fuse is often the cause of a vehicle's electrical equipment not working.
- Why are fuses needed? (2 marks)
 - Why do fuse ratings vary from 5 to 30 amps? (2 marks)
 - Explain how you would confirm that the cause of your car light not working was a blown fuse. (2 marks)
 - Explain how the instructor would advise a pupil on how to locate, identify and replace a fuse. (4 marks)

END OF QUESTIONS